HUD'S POST-DISASTER RECONSTRUCTION IN HONDURAS

Project Overview

In the fall of 1998, hurricanes Georges and Mitch battered Central America and the Caribbean, causing unprecedented damage. USAID transferred to HUD $10 million as part of a $621 million assistance bill. HUD used its expertise in housing and community redevelopment to rebuild communities in the region and help them become better able to resist the forces of natural disasters. All of the appropriated money was spent by January 31, 2002, including $3 million for Honduras.

HUD's innovative program has been well received by local officials and communities; provided model projects in land use planning, disaster preparedness, housing construction training and housing finance; illustrated the critical importance of housing and land use planning in any effective reconstruction program; and highlighted how new and creative partnerships between the federal government and private technical expertise can contribute to the effectiveness of American intervention abroad for post-disaster recovery.

Honduras

Land Use and Site Planning

HUD's work in Honduras began near the capital, Tegucigalpa, where many people were displaced because of the hurricane. Since many homes were built on illegal, unsafe land, city officials began to investigate a location for a new settlement. When the city and nongovernmental organizations found a site, located in Tegucigalpa in the Amarateca Valley, HUD contracted with California Polytechnic State University's Department of City and Regional Planning (San Luis Obispo) to analyze the site and create plan and design guidelines. CALPOLY studied the area and created risk assessment and land-use maps, a residential plot plan for different development sizes and configurations, and a manual with design guidelines. These studies became the foundation of HUD's later work in this area. (See below for more information.) The project also serves as a model for local universities, municipal planning offices and nongovernmental organizations to plan for effective resettlement in the aftermath of natural disasters. The project established a relationship between CALPOLY and a local planning university in Tegucigalpa, CEDAC, where faculty, students and other professionals can provide experience and expertise in environmental hazard assessment.

Another HUD site-planning project was the creation of a comprehensive training manual for instruction on basic land use planning techniques, *Los Fundamentos de Planificacion de Sitios*. People without legal title to land are usually forced into building on whatever land they can find – often on flood plains or other areas susceptible to natural disasters. The manual, prepared by the American Planning Association, incorporates the latest thinking on land use development principles, particularly site planning guidelines, as well as cost-effective ways to incorporate ecological and social factors in the post-disaster reconstruction plans. The manual is available from the Office of International Affairs.

Working locally with the International Office on Migration and the National Honduran University, APA was able to train over 100 municipal officials, planners,

engineers and architects in the fundamentals of land use planning in workshops that stressed the importance of site development planning as a way to reduce the effects of future natural disasters. Topics included site analysis, soil mechanics, and the future community's design relationship to the existing neighborhood. APA also developed a university curriculum on site planning which is being made available to all universities in Honduras.

Community Revitalization

HUD contracted with the International Organization for Migration to develop an integrated development plan, incorporating disaster prevention elements for four communities: Amarateca, the new settlement near Tegucigalpa, two neighborhoods of San Pedro Sula – Chamelecon and Rivera Hernandez – and San Juan de Tela, on the northern coast. The development guidelines focused on immediate needs and long-term goals, existing conditions, current socio-economic assets and practical opportunities for revitalization. The development plans were more in-depth than the one CALPOLY produced on Amarateca, as IOM created long-term, comprehensive development plans.

HUD also sought to establish the infrastructure to manage reconstruction for Amarateca and San Pedro Sula. Based on the US model of Community Development Corporations, HUD worked with the International City/County Management Association to establish two investment funds – one for Amarateca and one for the San Pedro Sula area – and two independent non-profit community development foundations. Using the money from the fund, the foundations, composed of nongovernmental organizations active in the communities, would administer the money on projects they deem a priority, as well as lobby for future funding. Included in the cost of the contract was seed money for the cost of establishing a functional governance system, including a board of directors, training, offices, and necessary equipment, like computers.

With the foundation in place, HUD used the community development organizations and comprehensive plans to conduct a variety of work. In Amarateca, HUD built elementary and vocational school buildings, latrines and a drainage system, a new street, a childcare center, and a computer facility. In Chamelecon, HUD built a drainage system, which ended flooding that had been common after heavy rainfall, and bought furniture for a local school and library. In Rivera Hernandez, HUD built a water distribution system. In the beach community San Juan de Tela, HUD built a childcare center and playground, restored a community center, and cleaned the beach and built five cabanas to provide shade, as part of an effort to restore the community's main source of income, tourism. In addition, HUD installed trash bins in the three communities.

HUD's last community revitalization project in Honduras sought to have a national impact. In cooperation with the local university, the Center for Design, Architecture and Construction (CEDAC), HUD developed and implemented eight urban forums – "Foro Urbano." These forums, held throughout the country during 2000 and 2001, brought together local and national government leaders, educational institutions, businesses and citizens to establish a national dialogue on development and reconstruction. Policy themes – such as water distribution and garbage collection – guided the roundtable discussions and urban development suggestions were incorporated into pamphlets for national distribution. As a result of the program, CEDAC has become

the center for all of the new government's housing information and urban planning research.

Housing Construction

The poor in Honduras, as in most other countries in the developing world, frequently build their own shelters using whatever materials are readily available – such as corrugated tin or wood pallets. As a result, these basic structures are exceptionally vulnerable to strong winds, heavy rains and other natural forces. To help teach people how to build sturdier and safer homes, HUD and the National Association of Home Builders (NAHB) Research Center developed a training manual to illustrate basic safe and durable construction practices for lower income families building their own homes. The Spanish language manual, *Reforzar y Conectar para Proteger: Ideas para Construir Mejor Desastres Naturales,* covers design, materials, technology and management. Written in user-friendly terms and advocating the use of local materials, such as cinder blocks, this manual helps the average resident build safer and more durable dwellings for his family. The manual is available from the Office of International Affairs. NAHB has also produced a companion video to reinforce the lessons in the book for both training sessions and for general television viewing in order to make the general public more aware of the need for building safely.

HUD and NAHB developed simple, low-cost housing construction technologies that strengthen the structural integrity of the home, increasing the chances that it will survive a hurricane. The basic methods being taught include: 1) using "hurricane clips," which attach the various structures of a home together to withstand high winds; 2) doubling the number of nails used on the roof to minimize the chance that the roof will be blown off; 3) using "U" blocks on windows and doors, which reinforce the openings without needing additional materials; and 4) stressing that concrete should only be mixed with gravel and sand and without any foreign materials that could weaken the mixture. NAHB trained over 300 construction supervisors in three workshops, through a partnership with INFOP, the national training organization, the National Honduran University Architecture Department, and CEDAC. The INFOP teachers and construction supervisors have become trainers in these methods, using the manual and video, and thus multiplying HUD's impact on building practices among the poorest population.